



Clin Exp Vaccine Res 2014;3:244-247
<http://dx.doi.org/10.7774/cevr.2014.3.2.244>
 pISSN 2287-3651 • eISSN 2287-366X

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Received: March 27, 2014
 Revised: April 7, 2014
 Accepted: April 10, 2014

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No potential conflict of interest relevant to this article was reported.

Guidelines for vaccination of dogs and cats in Korea

This guideline contains the recommended vaccination schedules of dogs and cats from World Small Animal Veterinary Association (WSAVA) and American Animal Hospital Association (AAHA). In 2010, WSAVA published guidelines for the vaccination of dogs and cats. And, in 2011, AAHA also published guidelines for vaccination of dogs. In Korea, there is no published guideline for vaccination of dogs and cats yet. Therefore, the plane of vaccination also reports the present situation of vaccination schedule of dogs and cats in Korean animal hospitals.

Keywords: Vaccination, Dogs and cats, Korea

Guidelines for Vaccination of Dogs

Guidelines for vaccination of general veterinary practice by World Small Animal Veterinary Association (WSAVA) and American Animal Hospital Association (AAHA)

Table 1 summarizes vaccination schedule base on WSAVA vaccination guidelines in 2010 [1] and AAHA vaccination guideline in 2011 [2].

Guidelines for vaccination of dogs in Korean animal hospitals

Table 2 shows vaccination schedules of dogs currently carried out in Korean animal hospitals.

Guidelines for Vaccination of Cats

Vaccination guideline for general veterinary practice by WSAVA

Table 3 summarizes WSAVA vaccination guidelines in 2010 [1].

Guidelines for vaccination of cats in Korean animal hospitals

Table 4 shows vaccination schedule of cats currently carried out in Korean animal hospitals.

Table 1. Guidelines for vaccination of dogs by WSAVA and AAHA [1,2]

Vaccine	Initial puppy vaccination (≤16 weeks)	Initial adult vaccination (>16 weeks)	Revaccination recommendation	Comments
CDV (MLV or rCDV, parenteral) CAV-2 (MLV, parenteral or intranasal) CPV-2 (MLV, parenteral)	Administer at 8-9 weeks of age, then every 3-4 weeks until 14-16 weeks of age	Two doses, 3-4 weeks apart are generally recommended by manufacturers, but one dose is considered protective	Revaccination (booster) at 1 year, then not more often than every 3 years	Core (Recommended)
CAV-1	Administer at 8-9 weeks of age, then every 3-4 weeks until 14-16 weeks of age	Two doses, 3-4 weeks apart are generally recommended by manufacturers but one dose is considered protective	Revaccination (booster) at 1 year, then not more often than every 3 years	Core (Recommended) But, not recommended where CAV-2 MLV available
Rabies (killed, parenteral)	Administer one dose as early as 3 months of age *In high risk areas and if permitted by law, give a second dose 2-4 weeks after the first dose	Administer a single dose	Canine rabies vaccines with either a 1- or 3-year DOI are available Timing of boosters is determined by this licensed DOI but in some areas may be dictated by statute	Core (Recommended)
CPiV (MLV, parenteral)	Administer at 8-9 weeks of age, then every 3-4 weeks until 14-16 weeks of age	Two doses, 3-4 weeks apart are generally recommended by manufacturers but one dose is considered protective	Revaccination (booster) at 1 year, then annually where CPiV is monovalent or combined with other non-core components	Non-core (Optional)
CPiV (MLV, intranasal)	Administer as early as 3 weeks of age and revaccinate within 3-4 weeks	Two doses, 3-4 weeks apart	Revaccination (booster) at 1 year, then annually	Non-core (Optional) This product is generally combined with intranasal <i>Bordetella bronchiseptica</i>
Bb (live avirulent bacteria, intranasal)	Administer a single dose as early as 3 weeks of age. For best results, a second dose should be given 2-4 weeks after the first	A single dose	Annually or more often in very high-risk animals not protected by annual booster	Non-core (Optional) This product is generally combined with intranasal CPiV
Bb (killed bacterin or cell wall antigen extract, parenteral)	Administer one dose at 6-8 weeks of age and one dose at 10-12 weeks of age	Two doses, 2-4 weeks apart	Annually or more often in very high-risk animals not protected by annual booster	Non-core (Optional) The MLV intranasal product is preferred to the killed parenteral to provide local and systemic protection
Li (killed bacterin, parenteral)	Initial dose at 12-16 weeks of age or older after completion of the puppy core viral vaccines with a second dose 3-4 weeks later	Two doses 3-4 weeks apart, then annually or more often	See manufacturer's indications for use	Non-core (Optional) Vaccination should be restricted to use in geographical areas where a significant risk of exposure has been established or for dogs whose lifestyle places them at significant risk
CiV (killed, parenteral)	Two doses 2-4 weeks apart with initial dose at >6 weeks of age	Two doses, 2-4 weeks apart	Annually	Non-core (Optional) Consider for at-risk groups of co-housed dogs such as those in kennels, dog shows or day care
CCV	Intentionally left blank	Intentionally left blank	Intentionally left blank	Not recommended Prevalence of clinical cases of confirmed CCV disease does not justify vaccination

WSAVA, World Small Animal Veterinary Association; AAHA, American Animal Hospital Association; CDV, canine distemper virus; MLV, modified live vaccine; rCDV, recombinant canine distemper virus; CAV-2, canine adenovirus-2; CPV-2, canine parvovirus-2; CAV-1, canine adenovirus-1; DOI, duration of immunity; CPiV, canine parainfluenza virus; Bb, *Bordetella bronchiseptica*; Li, *Leptospira interrogans*; CiV, canine influenza virus; CCV, canine corona virus.

Table 2. Guidelines for vaccination of dogs in Korean animal hospitals

Vaccine	Initial puppy vaccination (≤16 weeks)	Revaccination recommendation
CDV (MLV or rCDV, parenteral) + CAV-2 (MLV, parenteral) + CPV-2 (MLV, parenteral) + CPiV (MLV, parenteral) + DHPP	1. In most of Korean animal hospitals, administer at 6-8 weeks of age, then every 2 weeks until 14-16 weeks of age (5-6 doses) 2. In a few Korean animal hospitals, administer at 6-8 weeks of age, then every 3-4 weeks until 14-16 weeks of age (3 doses)	In most of Korean animal hospitals, annually revaccination is recommended
Rabies (killed, parenteral)	In most of Korean animal hospitals, administer one dose at 16 weeks of age	Canine rabies vaccines with either a 1- or 3-year DOI are available Timing of boosters is determined by this licensed DOI
Bb (cell wall antigen extract, parenteral)	In most of Korean animal hospitals, administer one dose at 10 weeks of age and one dose at 12 weeks of age (2 doses)	In most of Korean animal hospitals, annually revaccination is recommended
CiV (killed, parenteral)	In most of Korean animal hospitals, administer one dose at 14 weeks of age and one dose at 16 weeks of age (2 doses)	In most of Korean animal hospitals, annually revaccination is recommended
CCV (killed, parenteral)	In most of Korean animal hospitals, administer one dose at 6 weeks of age and one dose at 8 weeks of age (2 doses)	In most of Korean animal hospitals, annually revaccination is recommended

CDV, canine distemper virus; MLV, modified live vaccine; rCDV, recombinant canine distemper virus; CAV-2, canine adenovirus-2; CPV-2, canine parvovirus-2; CPiV, canine parainfluenza virus; DHPP, combination vaccines that include CDV (Distemper)+CAV-2 (Hepatitis)+CPV (Parvo)+CPiV (Parainfluenza); DOI, duration of immunity; Bb, *Bordetella bronchiseptica*; CiV, canine influenza virus; CCV, canine corona virus.

Table 3. Guidelines for vaccination of cats by WSAVA [1]

Vaccine	Initial kitten vaccination (≤16 weeks)	Initial adult vaccination (>16 weeks)	Revaccination recommendation	Comments
FPV (MLV, parenteral or killed, adjuvanted parenteral or killed, non-adjuvanted parenteral or MLV, non-adjuvanted intranasal)	Begin at 8-9 weeks of age, with second dose 3-4 weeks later, and final dose at 16 weeks of age or later	2 doses, 3-4 weeks apart	A single dose is given 1 year following the last dose of the initial series, then no more frequently than every 3 years	Core (Recommended) Use of MLV vaccines is not recommended in pregnant cats and FeLV and/or FIV infected cats Intranasal vaccination may not be as effective as injectable vaccination in high-risk environments
FHV-1 (MLV, non-adjuvanted parenteral, intranasal or killed, adjuvanted parenteral) FCV (MLV, non-adjuvanted parenteral, intranasal or killed, adjuvanted parenteral)	Begin at 8-9 weeks of age, with second dose 3-4 weeks later, and final dose at 16 weeks of age or later	2 doses, 3-4 weeks apart	A single dose is given 1 year following the last dose of the initial series, then no more frequently than every 3 years	Core (Recommended) MLV FHV-1/FCV vaccines are invariably combined with each other, either as bivalent products or in combination with additional vaccine antigens (e.g., FPV) Mild upper respiratory disease signs are occasionally seen following intranasal vaccination
Rabies (canary pox virus-vectored recombinant non-adjuvanted, parenteral)	Administer a single dose as early as 8 weeks of age, with revaccination 1 year later	Administer 2 doses, 12 months apart	Annual booster is required	Non-core (Optional) But required by statute (e.g., for pet travel) or in areas where the disease is endemic
Rabies (1, 3, and 4 year killed, adjuvanted parenteral)	Administer a single dose as early as 12 weeks of age, with revaccination 1 year later	Administer 2 doses, 12 months apart	Booster as per licensed DOI or as required by local regulations	Non-core (Optional) But required by statute (e.g., for pet travel) or in areas where the disease is endemic
FeLV (canary pox virus-vectored recombinant, non-adjuvanted, or killed, adjuvanted, parenteral or recombinant protein subunit adjuvanted, parenteral)	Administer an initial dose as early as 8 weeks of age A second dose should be administered 3-4 weeks later. Two initial doses required	Two doses, 3-4 weeks apart	Revaccination indicated when a single dose is given 1 year following the last dose of the initial series, then not more often than every 3 years in cats determined to have sustained risk of exposure	Non-core (Optional) Only FeLV negative cats should be vaccinated FeLV testing prior to vaccine administration should be mandatory
FIV (killed, adjuvanted, parenteral)	3 doses are required The initial dose is administered as early as 8 weeks of age; 2 subsequent doses should be administered at an interval of 2-3 weeks	3 doses are required Each dose is administered 2-3 weeks apart	When indicated, a single dose is given 1 year following the last dose of the initial series, then annually in cats determined to have sustained risk of exposure	Not recommended Vaccination induces production of antibodies indistinguishable from those developed in response to FIV infection Vaccination interferes with antibody-based FIV diagnostic tests for at least a year following vaccination

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Table 3. Continued

Vaccine	Initial kitten vaccination (≤16 weeks)	Initial adult vaccination (>16 weeks)	Revaccination recommendation	Comments
FIP (MLV, non-adjuvanted, intranasal)	Administer a single dose as early as 16 weeks of age, and a second dose 3-4 weeks later	Two doses, 3-4 weeks apart	Annual booster is recommended by the manufacturer	Not recommended According to the limited studies available, only cats known to be feline coronavirus antibody negative at the time of vaccination are likely to develop some level of protection. It is rare that a cat will be coronavirus antibody negative
Bb (avirulent live, non-adjuvanted, intranasal)	Administer a single dose intranasally as early as 8 weeks of age	Administer a single dose intranasally	Annual booster is indicated for cats with sustained risk	Non-core (Optional) Vaccination may be considered in cases where cats are likely to be at specific risk of infection Studies have not shown this product to reduce severity of the feline respiratory disease complex
<i>Chlamy-dophila</i> (avirulent live, non-adjuvanted, parenteral or killed, adjuvanted, parenteral)	Administer the initial dose as early as 9 weeks of age. A second dose is administered 3-4 weeks later	Administer 2 doses, 3-4 weeks apart	Annual booster is indicated for cats with sustained exposure risk	Non-core (Optional) Vaccination is most appropriately used as part of a control regime for cats in multiple-cats environments where infections associated with clinical disease have been confirmed These vaccines may be associated with adverse reactions (hypersensitivity)

WSAVA, World Small Animal Veterinary Association; FPV, feline panleukopenia virus; MLV, modified live vaccine; FeLV, feline leukemia virus; FIV, feline immunodeficiency virus; FHV-1, feline herpes virus-1; FCV, feline calici virus; DOI, duration of immunity; FIP, feline infectious peritonitis; Bb, *Bordetella bronchiseptica*.

Table 4. Guidelines for vaccination of cats in Korean animal hospitals

Vaccine	Initial kitten vaccination (≤16 weeks)	Revaccination recommendation
FPV (MLV, parenteral) + FHV-1 (MLV, parenteral) + FCV (MLV, parenteral) + <i>Chlamy-dophila</i> (avirulent live, parenteral)	In most of Korean animal hospitals, administer at 8-9 weeks of age, then every 3 weeks until 14-15 weeks of age (3 doses)	In most of Korean animal hospitals, <u>annually revaccination</u> is recommended
Rabies (killed, parenteral)	In most of Korean animal hospitals, administer one dose at 15 weeks of age	In most of Korean animal hospitals, <u>annually revaccination</u> is recommended
FIP (MLV, non-adjuvanted, intranasal)	<u>In a few of Korean animal hospitals</u> , administer a single dose as early as 15 weeks of age, and a second dose 3-4 weeks later	<u>In a few of Korean animal hospitals</u> , <u>annually revaccination</u> is recommended
FeLV (canary pox virus-vectored recombinant, non-adjuvanted, or killed, adjuvanted, parenteral or recombinant protein subunit adjuvanted, parenteral)	<u>In a few of Korean animal hospitals</u> , administer a single dose as early as 8-9 weeks of age, and a second dose 3-4 weeks later	<u>In a few of Korean animal hospitals</u> , <u>annually revaccination</u> is recommended

FPV, feline panleukopenia virus; MLV, modified live vaccine; FHV-1, feline herpes virus-1; FCV, feline calici virus; FIP, feline infectious peritonitis; FeLV, feline leukemia virus.

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